DEPARTMENT OF THE AIR FORCE
HQ Air Force Operational Test and Evaluation Center

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Test and Evaluation
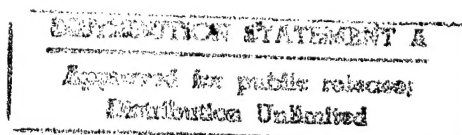
SOFTWARE SUPPORT RESOURCES EVALUATION GUIDE

The purpose of this pamphlet is to provide Air Force Operational Test and Evaluation Center (AFOTEC) personnel information needed to evaluate software support resources (SSR) as they influence overall software supportability. This pamphlet describes how to plan, conduct and report a software support resources evaluation, and contains a standardized questionnaire that provides a framework for obtaining test team evaluator ratings of the adequacy of planned or existing software support resources.

This volume is number five in a series of software operational test and evaluation guides prepared by the Software Analysis Team at Headquarters (HQ) AFOTEC. Local reproduction of all volumes in this series is authorized. This volume is an evolutionary document that will be updated periodically. Comments should be directed to the office of primary responsibility (OPR).

SUMMARY OF CHANGES

AFOTEC Pamphlet (AFOTECPAM) 99-102 replaces AFOTEC Pamphlet 800-2, all volumes. This volume has been completely rewritten.

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Chapter 1

INTRODUCTION

1.1 General. This pamphlet describes how to plan, conduct, and report a software support resources evaluation in support of AFOTEC-conducted operational test and evaluation. Contained in this publication is a standardized questionnaire used to evaluate the presence and "reasonableness" of the processes, activities, and resources needed to support a fielded software system; rate the software support activity (SSA) as acceptable or unacceptable; and provide feedback to the SSA on problem areas.

1.2. Overview of the Guide. This guide is divided as follows:

Chapter 1 - provides general information about the evaluation and covers the responsibilities of the AFOTEC personnel involved.

Chapter 2 - describes the philosophy and process of evaluating software support resources to include evaluation planning, conduct, and reporting.

Attachment 1 - Questionnaire. Questions were derived from multiple sources (e.g., the Software Engineering Institute's Capability Maturity Model for Software; various DoD and MIL standards and handbooks).

Attachment 2 - Summary answer sheet. Use this answer sheet to transcribe your ratings and important comments from the questionnaire. Send them to AFOTEC/SAS for incorporation into SAS's historical database.

1.3. Overview of the Evaluation.

1.3.1. **What are "software support resources" and why are they important?** Software support resources are the plans, processes, people, and physical resources required to support a software system after deployment. Post-deployment modifications to software are often necessary to correct errors, enhance system capabilities, and modify software to be compatible with changes in the computing environment. Software support resources are important because of their impact on software supportability. Software often dominates a system's life-cycle cost and responsiveness to changing mission requirements. Consequently, the Air Force invests billions of dollars each year supporting deployed software—much more

than is spent developing new software. Software support resources are one of three major elements of a software system that affect the ability of software maintenance personnel to make changes (figure 1).
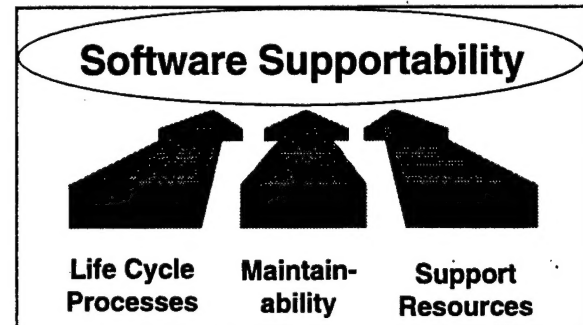

Figure 1-1. Elements of Software Supportability

1.3.2. **Why are software support resources evaluated during OT&E?** Software supportability is evaluated as part of the AFOTEC assessment of system suitability. A software system that cannot continue to evolve to meet user requirements after the system is fielded is not suitable. Other software evaluations that address suitability include the software support life-cycle process (volume 2) and software maintainability (volume 3). The goal of the software support resources evaluation is to provide decision-makers with information necessary for making acquisition decisions and to report software support deficiencies to facilitate improvements.

1.3.3. **How are software support resources evaluated?** This evaluation does not directly measure the capability of software support resources, rather it evaluates the presence and "reasonableness" of the processes and resources needed to support a fielded software system. The evaluation focuses on software support activity (SSA) plans, processes, activities, and resources. Typically the software test manager (STM), deputy for software evaluation (DSE) and/or SSR evaluators answer a standardized questionnaire by reviewing documentation and interviewing key program personnel. Each question and topic area is rated as either ACCEPTABLE or UNACCEPTABLE. If UNACCEPTABLE, an impact rating is also assigned. The overall score for the system is compared against

an AFOTEC threshold to determine whether the software support resources are adequate or not.

1.3.4. When are software support resources evaluated?

Ideally, the SSR evaluation should be conducted continually throughout the engineering and manufacturing development (EMD) phase. As the software support concept matures, the focus of the evaluation will move from planning processes, to actual plans, to an operating SSA. As an alternative, an SSR evaluation can be conducted in a short period of time with a goal of producing a report. Any unresolved issues at the end of dedicated OT&E should be documented in the final OT&E report.

1.4. Personnel Responsibilities.

The responsibilities of the STM, the test team DSE and the SSR evaluators are described in AFOTECPAM 99-102, volume 1. The following paragraphs add detail for this specific evaluation methodology.

1.4.1. STM Responsibilities.

The STM is responsible for developing the software inputs to the test concept for the test manager. If a DSE has already been assigned to the test program, then he/she will assist in developing these inputs. The STM decides if an SSR evaluation is necessary and when to accomplish the evaluation and documents this decision in his/her test concept inputs. When a test team DSE is in place, the STM provides the support necessary for the DSE to perform the evaluation. The STM also ensures the evaluation is conducted in the manner described in this pamphlet, and ensures the aggregation strategy for the evaluation is followed.

1.4.2. DSE Responsibilities.

The test team DSE is required to conduct the evaluation in the manner described in this pamphlet and consistent with the planning performed by the STM. The DSE is also required to report the results using the aggregation strategy contained herein. If there is no DSE on the test team, the STM performs the duties of both the STM and the DSE.

1.4.3. SSR Evaluator Responsibilities.

The SSR evaluators, under the supervision of the DSE, carry out the evaluation activities identified in the operational assessment or OT&E test plan. These activities, as they relate to the SSR evaluation, include assisting the DSE in the collection and review of evaluation materials (including software support resources and computer system documentation) and preparation of the OA or OT&E report. SSR evaluators may be AFOTEC resources (test team members) or support facility personnel. Because the contributions of the evaluators are most important to the quality of the SSR evaluation results, the following qualifications are desirable for their participation in the evaluation:

1.4.3.1. Experience in some phase of the development of a software support facility (design, prototype or operation).

1.4.3.2. Experience in the management or use of software support resources.

1.4.3.3. Technical experience in the hardware and software areas of the computer systems for which the resources are being evaluated.

1.4.3.4. Familiarity with operational practices that contribute to effective and efficient support of computer system software.

Chapter 2

EVALUATION PHILOSOPHY AND PROCESS

2.1. Evaluation Philosophy.

2.1.1. The purpose of this evaluation is to determine the presence or absence of certain processes, activities, and facilities that provide the SSA's capability to support the system. Multiple evaluations may be necessary to help determine if the SSA is progressing towards meeting its mission support requirements. This will also help identify problem areas and document the SSA's progress. You should also use this guide continuously throughout the EMD phase to review documentation as it becomes available and to generate topics for discussion at software meetings, technical interchange reviews, design reviews, etc. Raising software support issues early is the best way to improve processes and products and avoid higher costs later.

2.1.2. The support processes, activities, and facilities are broken into six topics for ease of evaluation:

- Early SSA planning and involvement

- SSA software project planning
- SSA software project tracking and oversight
- SSA software contract management
- SSA software quality assurance
- SSA software configuration management

2.1.3. A Software Support Activity (SSA) is defined as the organizations responsible for managing and performing the software support effort. The same organization may both manage and perform the support, or software projects may be contracted to a maintenance organization or to the original developer. When the management and performance of software support are completed by different organizations, then both must be evaluated. Note that the assignment of a software system to an SSA may not be a permanent assignment, and there may be several contractors involved in implementing the software support concept for large systems.

2.2. Evaluation Process. The evaluation process includes three distinct phases:

2.2.1. **Planning.** You can accomplish the SSR evaluation any time during a system's life cycle, but the evaluation is more beneficial if conducted during the EMD phase. If possible, an ongoing SSR evaluation should be conducted throughout the EMD phase. To conduct an ongoing evaluation, update your response to each question as new information becomes available. An ongoing evaluation can help determine problem areas early enough to provide useful feedback for improving the system, and can help transition the program when the action officer changes. A report can be written any time formal results are required. An SSR evaluation can also be conducted over a short period of time with the goal of producing a required report. Planning activities include locating and acquiring the needed documentation and setting a suspense for the reports. It is important to evaluate all documentation used by the SSA. The following list identifies some applicable documents:

- Software Quality Assurance (SQA) Plan
- Software Configuration Management (SCM) Plan
- Software Maintenance Plan
- Software Test Plan/Procedures
- System Safety Program Plan (SSPP)
- SSA Training Plan
- SSA Coding Standards
- MOAs/MOUs between using commands and SSA
- Change Reporting Instructions

- Contractor Work Breakdown Structure (WBS), CDRL, Schedule
- Computer Resources Life Cycle Management Plan (CRLCMP)
- Computer Resources Working Group (CRWG) Charter/Minutes
- Computer Resources Integrated Support Document (CRISD)
- Integrated Logistics Support Plan (ILSP)
- Test and Evaluation Master Plan (TEMP)

While this list is not all-inclusive, it does identify the types of documents that will be necessary. In general, review any document that guides how the software maintenance work will be done. You should plan on 1 to 2 weeks for reviewing the documents and understanding how the SSA works.

2.2.2. **Conducting the Evaluation.** The evaluation is conducted through documentation reviews and interviews. Try to do the document review over the course of 1 to 2 weeks. This assumes you are able to get all of the documents in one place at one time. If you are conducting an ongoing evaluation, review documents as they become available. It is important that you keep the evaluation results up-to-date. When reading the documents, you must provide comments/rationale for all applicable questions. Jot down anything that will help explain your rating.

You should interview SSA personnel, if possible, to confirm some answers. Set up these interviews to minimize impact on the SSA. Set aside 1 or 2 days to interview the SSA manager, lead software engineer, the SQA manager, the SCM manager, the SSA's test manager, computer systems manager, a few programmers, and any others deemed necessary. If you are conducting an ongoing evaluation, conduct interviews at action officer-level meetings you attend.

After you have completed your review of all appropriate documents, interview the people who actually (or potentially) will perform the work. Try to determine if work is done as described in the documented plans. Table 2.1 contains sample questions to be considered before the evaluation is complete. Finalize your analysis after completion of the documentation review and interviews.

You must understand how the SSA addresses each topic and then determine if the process/activity is present and reasonable. If the process/activity is present and reasonable, mark the question as **ACCEPTABLE**. Note that **ACCEPTABLE** does not

Table 2.1. Document Review Guidelines

Consider the following when reviewing SSR-related documentation:
• Is the required information there? • Is the information understandable? • Is the information consistent with everything else you've read? • Is the information traceable to predecessor documents? • Does the information lend itself to making the support easier? • Is the information correct? • If you deem a question unacceptable, what is the impact of this deficiency on the overall software support?

necessarily mean perfect. If the process/activity isn't present, or is present but not reasonable, mark the question as **UNACCEPTABLE** and then rate its impact. The impact rating should be the impact of this deficiency on the overall software support as described in table 2.2.

Table 2.2. Operational Impact Ratings

RATING	DESCRIPTION
VERY LOW	Some minor impact on the SSA's ability to support the software.
LOW	There is a reasonable expectation the deficiency will impact the quality and/or timeliness of post-deployment software releases.
MODERATE	There is a high expectation the deficiency will impact the quality and/or timeliness of post-deployment software releases.
HIGH	There is a reasonable expectation the deficiency will prevent the SSA from meeting documented operational requirements.
VERY HIGH	There is a high expectation the deficiency will prevent the SSA from meeting documented operational requirements.

2.2.3. Analyzing the Results. Assign points to each unacceptable question based on its impact: VERY LOW = 1; LOW = 2; MODERATE = 5; HIGH = 15; VERY HIGH = 30. Next, total the number of impact rating points. We realize the impact ratings are subjective, so use your best judgment. Compare the sum ob-

tained to the threshold of 30. If the sum is higher than the threshold you should give the SSR evaluation an UNACCEPTABLE rating. Provide rationale to support this rating.

2.2.4. Reporting. AFOTEC Instruction 99-101, *Management of Operational Test and Evaluation*, requires an activity report on all software evaluations. The requirement for format, submission frequency, content, and distribution of activity reports will vary by program and should be defined in the OT&E plan. The Software Support Resources Evaluation report documents the results of the evaluation for inclusion into the OT&E Final Report, and provides the program office and the SSA feedback on strengths and weaknesses. You must describe deficiencies to provide the SSA with useful feedback on problem areas. Use a statement similar to the following in your executive summary: "Based on the number and impact of the deficiencies found, the program's software support resources are rated as acceptable/unacceptable." Plan on 3 weeks for developing and coordinating your evaluation report. DSE-developed evaluation reports are normally signed by the test director or detachment commander.

Note to Test Team DSEs: Please send a draft copy of all reports to your SAS software test manager for review before you release them. In addition, be sure to provide a copy of your SSR answer sheet (attachment 2).

2.3. Notes to the Evaluators. Keep in mind the following points when performing an SSR evaluation:

2.3.1. The SSR evaluation is designed to evaluate processes and activities of the SSA—whether the support activity is an Air Logistics Center (ALC), the user, or a contractor. It is important to determine who will support the software system.

2.3.2. You can perform this evaluation even if the SSA is not yet activated. If the SSA does not come on line until later in the life cycle, evaluate the processes currently in use and the future plans for the SSA.

2.3.3. Remember you are determining if the activities or processes are *present* and *reasonable* for the program. When completing the questionnaire, avoid trying to find out how the SSA could be better. Your job is not to inspect their work. You are there to determine if the SSA can support the software system. If you do see potential improvements, provide them as suggestions—not as part of the rating.

2.3.4. Bear in mind that you have been chosen for a specific evaluation based upon your demonstrated expertise. That expertise and professionalism will go a long way in providing the Air Force with quality software support resources.

GEORGE B. HARRISON
Major General, USAF
Commander

QUESTIONNAIRE

A1.1. Early Software Support Activity (SSA) Planning and Involvement. The SSA must participate early in the acquisition process. Software acquisition issues are important components of the program manager's responsibilities, and acquisition managers at all levels should understand that post-deployment software support (PDSS) cost, particularly software life cycle cost, is largely determined during acquisition. In addition to providing cost saving PDSS concept alternatives, the SSA supports the program manager by performing or actively participating in many other program activities.

A1.2. Software Project Planning. Software project planning involves developing estimates for the work to be performed, establishing the necessary commitments, and defining the plan to perform the work. The SSA establishes a plan to address the commitments to the customer according to the resources, constraints, and capabilities of the project. The plan provides the basis for initiating the software maintenance effort, testing, and managing the progress of the work.

A1.3. Software Project Tracking and Oversight. Software project tracking and oversight involve tracking and reviewing the software accomplishments and results against documented estimates, commitments, and plans. The SSA must then adjust these based on the actual accomplishments and results. The SSA uses a documented plan for the software maintenance effort to track the software maintenance activities, communicating status, and revising plans. Software managers monitor the software activities on a regular basis. The SSA conducts regular technical reviews and management reviews to ensure management and staff are aware of the software project's status and plans, and that issues receive appropriate attention.

A1.4. Software Contract Management. Software contract management involves establishing commitments with the contractor on the work to be performed, coordinating activities with the contractor, and tracking and reviewing performance and results. The SSA establishes a documented agreement covering the technical and nontechnical requirements and is the basis for managing the contract. The SSA conducts regular technical and management reviews to ensure management and staff of both organizations are aware of the software status/plans, and that issues receive appropriate attention. *NOTE:* Skip this section if no work is to be contracted.

A1.5. Software Quality Assurance (SQA). Software quality assurance involves reviewing and auditing the software products and activities to ensure that they comply with the applicable processes standards, and procedures. The SQA group provides the staff and managers with the results of the reviews and audits. A software quality assurance function should be required on all projects. The SQA group is independent of the software groups and project management. The SSA identifies a senior manager who is committed to handling software quality issues. Where compliance issues exist, the SQA group works with the appropriate managers to resolve the issues.

A1.6. Software Configuration Management (SCM). Software configuration management involves controlling project baseline items (e.g., the project description, products, and process specifications) and changes to them. SCM also involves recording and reporting status and change activity for these items. The SCM group systematically controls these baseline items using a defined change control process. The SCM group can identify the configuration (software and documentation) of a system, or of any of the controlled intermediate or support products, at any point in time.

For the purposes of the SSR questionnaire, we used the term "approach" to denote a process, a plan, or existing on-site resources. If a plan for any given activity isn't developed yet, evaluate the *process* used to develop such a plan. If the SSA has developed a plan specifically for this project, then evaluate that *plan*. If the SSA is already operating (e.g., the facilities, hardware, software, and staff are in place), then evaluate the *resources*.

I. Early SSA Planning and Involvement

Topic: Early SSA Planning and Involvement

Question No.: PD-1

Question: Early planning for PDSS is adequate.

Discussion: Ensure:

- ❑ Early designation and participation by the SSA.
- ❑ The program office reviews PDSS plans periodically to ensure currency and that assumptions are still valid.
- ❑ The CRLCMP and ILSP include the PDSS concept and SSA resource requirements.
- ❑ The SSA actively participates in CRLCMP development and the CRLCMP complements the ILSP.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                 LOW
                                                                 MODERATE
                                                                 HIGH
                                                                 VERY HIGH

Comments/Rationale:

Topic: Early SSA Planning and Involvement

Question No.: PD-2

Question: Acquisition requirements imposed on the software developer which facilitate PDSS are identified.

Discussion: Ensure:

❑ Specific hardware and software requirements are specified in the development contract to promote a uniform PDSS environment at the SSA (e.g., automated tools, network protocols, document or publication standards, configuration management forms/documents or data elements.

❑ The SSA identified the necessary technical data (i.e., software documentation).

❑ The SSA and the program office have:
- identified and defined software quality requirements.
- developed/maintained standard techniques for software quality evaluation.
- established acceptance criteria.

❑ The SSA participated in the evaluation of the program office's plans and procedures for software management, software engineering, SCM, software corrective action, etc.

❑ The program office has contractually identified transition requirements (e.g., hardware, networks, software installation and test, security, maintenance, training, transfer of software licensing agreements, and transition of SCM).

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                  LOW
                                                                  MODERATE
                                                                  HIGH
                                                                  VERY HIGH

Comments/Rationale:

Topic: Early SSA Planning and Involvement   **Question No.:** PD-3

Question: The SSA actively participates in the evaluation of software product supportablility.

Discussion: Ensure:

❑ The SSA is actively involved in defining quality standards for the software product.
❑ The SSA is actively involved in defining the software engineering environments, and SSA resource requirements.
❑ The SSA examines software characteristics, particularly correctness, testability, and flexibility.

NOTE: Opportunities for the SSA to evaluate software supportability include:
- Software product and activity reviews.
- Software technical reviews and audits.
- Software Independent Verification and Validation activities.
- AFOTEC software supportability and maturity evaluations.
- Formal qualification testing.
- Government software acceptance evaluations.

Rating:	ACCEPTABLE	UNACCEPTABLE + IMPACT:	VERY LOW
			LOW
			MODERATE
			HIGH
			VERY HIGH

Comments/Rationale:

Topic: Early SSA Planning and Involvement   **Question No.:** PD-4

Question: The SSA is actively involved in assuring software quality and program requirements are achieved and correctly implemented.

Discussion: Ensure the SSA participates in:

❏ Authenticating specifications.
❏ Verifying requirements.
❏ Evaluating proposed software quality plans, records and activities.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                              LOW
                                                                              MODERATE
                                                                              HIGH
                                                                              VERY HIGH

Comments/Rationale:

Topic: Early SSA Planning and Involvement   **Question No.:** PD-5

Question: The SSA actively participates in transition planning.

Discussion: Ensure the SSA transition activities include:

- ❑ Participation on the Configuration Control Boards.
- ❑ Acquisition of all needed resources used or generated during software development.
- ❑ Installation and check out of the deliverable software in the support environment.
- ❑ Demonstrating the deliverable software can be regenerated (compiled/linked/loaded into an *executable* product) and maintained using available support software and hardware.
- ❑ Adequately training personnel to provide software support.
- ❑ Turnover, installation, checkout, and integration of any hardware or software received from sources other than the developing agency.
- ❑ Implementation of all required PDSS activities and capabilities (e.g., problem replication and fault isolation, corrective action, software generation, integration and test, support systems, document production).
- ❑ Approval and implementation of applicable software management plans (e.g., configuration management plan, software quality plan).
- ❑ Verification that transition milestones have been correctly completed and all necessary resources are available.
- ❑ Integration of all PDSS activities into a cohesive PDSS process.
- ❑ Reporting software transfer.
- ❑ Determination that security requirements have been satisfied.
- ❑ Determination that safety requirements have been satisfied.
- ❑ Configuration management.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                      LOW
                                                                      MODERATE
                                                                      HIGH
                                                                      VERY HIGH

Comments/Rationale:

Topic: Early SSA Planning and Involvement   **Question No.:** PD-6

Question: The Computer Resources Working Group (CRWG) is chartered and operational.

Discussion: Ensure the CRWG:

- ❏ Is formally chartered with the coordination of the operating, supporting, and participating commands as well as AFOTEC and any other OTAs.
- ❏ Meets regularly and advises program management in all areas relating to the acquisition and support of computer resources.
- ❏ Develops and periodically updates the CRLCMP.
- ❏ Selects a software support concept and documents it in the CRLCMP.
- ❏ Monitors compliance of the program with computer resources policy, plans, procedures, and standards.
- ❏ Integrates software test activities with the overall test program.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                        LOW
                                                                        MODERATE
                                                                        HIGH
                                                                        VERY HIGH

Comments/Rationale:

II. SSA Software Project Planning

Topic: Software Project Planning   **Question No.:** PP-1

Question: The SSA has as a documented approach to allocate maintainability requirements in a consistent format and to ensure the requirements are clearly stated, verifiable, and testable.

Discussion: Ensure the approach requires the SSA to include in program documentation:

(NOTE: If late in the project's development life cycle (i.e., approaching OT&E) evaluate and report if the items below are in place, adequate, and/or operational.)

❑ The agreements, conditions and contractual terms that affect and determine the software maintenance effort -- deliverables, delivery dates, milestones, programming languages and software engineering environments.
❑ The technical requirements for the software.
❑ The interface requirements, including the external software interfaces to hardware, other software systems and human interfaces.
❑ The criteria used to evaluate the software products for acceptance.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                   LOW
                                                                   MODERATE
                                                                   HIGH
                                                                   VERY HIGH

Comments/Rationale:

Topic: Software Project Planning   **Question No.:** PP-2

Question: The SSA develops the project's software maintenance plan according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

❑ Base the plan on the approved work statements and the approved allocated requirements, and conforms to customer and project standards.

❑ Negotiate and budget plans for involvement of the software maintenance group in the activities of other project groups (i.e., SQA) are negotiated and budgeted.

❑ Document the agreements.

The software maintenance plan should address the:

❑ Project purpose, scope, goals and objectives.

❑ Identification and description of the project's software maintenance processes.

❑ Identification of the approaches, methods, and standards for software maintenance and software management.

❑ Software maintenance group participation in overall project planning.

❑ Identification of software products to be developed -- products for internal use, products for use by other product groups (i.e., SQA), products for delivery to the external customer.

❑ Size estimates of the software products.

❑ Staff resource estimates (skills and numbers).

❑ Staff training requirements (both initial and continuation).

❑ Software project schedules and milestones.

❑ Identification and assessment of the project's software risks.

❑ Emergency action fixes and emergency releases.

❑ Hardware and software requirements.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                                      LOW
                                                                                      MODERATE
                                                                                      HIGH
                                                                                      VERY HIGH

Comments/Rationale:

Topic: Software Project Planning

Question: The SSA derives estimates for software size, maintenance resources, costs, and risks according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

- ❏ Estimate software size for all software products and activities.
- ❏ Using historical data where available.
- ❏ Document size estimating assumptions.
- ❏ Document, review, and agree to size estimates.
- ❏ Relate estimates for software maintenance resources and costs to the size estimates of the software products.
- ❏ Use objective productivity data (historical and current) from the organization's projects for estimates.
- ❏ Base effort/staffing and cost estimates on past experience.
- ❏ Document, review, and agree to the estimates and assumptions made in deriving the estimates.
- ❏ Analyze and prioritize the risks based on their potential product impact.
- ❏ Identify contingencies for the risks.

Rating:	ACCEPTABLE	UNACCEPTABLE + IMPACT:	VERY LOW
			LOW
			MODERATE
			HIGH
			VERY HIGH

Comments/Rationale:

Topic: Software Project Planning   **Question No.:** PP-4

Question: The SSA derives estimates for critical computer resources according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

- ❑ Identify critical computer resources for the project.
- ❑ Relate the estimates for the computer resources to the estimates of software product size, operational processing load, and communications traffic.
- ❑ Document, review, and agree to estimates of critical computer resources.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                     LOW
                                                                     MODERATE
                                                                     HIGH
                                                                     VERY HIGH

Comments/Rationale:

Topic: Software Project Planning   **Question No.:** PP-5

Question: The SSA derives the project's software schedule according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

❑ Relate the software schedule to the estimates for software size and software maintenance resources and costs.
❑ Base the software schedule on past experience.
❑ Relate the software schedule to imposed milestone dates, critical dependency dates and other constraints.
❑ Ensure the software schedule activities and milestones are of appropriate duration/time separation to support reasonable accuracy in progress measurement.
❑ Objectively determine the completion of software schedule activities and milestones.
❑ Document, review, and agree to the software schedule.
❑ Establish regularly scheduled releases and ensure the release schedule accommodates the project's changing environment.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                LOW
                                                                MODERATE
                                                                HIGH
                                                                VERY HIGH

Comments/Rationale:

Topic: Software Project Planning   **Question No.:** PP-6

Question: The SSA prepares plans for the project's software maintenance facilities, environments, and support tools according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

- ❏ Base estimates of capacity requirements for these facilities, environments, and tools (i.e., software test computers and peripherals) on the project's software size and stability estimates and other characteristics.
- ❏ Assign responsibilities and negotiate commitments to procure or develop these facilities, environments, and tools.
- ❏ Review and approve the plans for the facilities, environments, and tools.

Rating:	ACCEPTABLE	UNACCEPTABLE + IMPACT:	VERY LOW
			LOW
			MODERATE
			HIGH
			VERY HIGH

Comments/Rationale:

Topic: Software Project Planning   **Question No.:** PP-7

Question: The SSA develops proposed manning levels and workload for this project according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

- ❑ Base manning levels on the expected rate of change in the software.
- ❑ Use software size and cost estimating tools to help plan workload (Several tools are available -- REVIC, SASET, COCOMO, Ada COCOMO, SEER-SEM, SLIM, CHECKPOINT, SoftCost-Ada, SoftCost-R, Estimacs, Price S, etc.).
- ❑ Calibrate estimating tools regularly using actual data collected by the SSA.

If appropriate for this stage of the project's life cycle, answer the following:

- ❑ For the staff currently maintaining the system, at least 5 percent of the maintenance personnel have in-depth experience with the system.
- ❑ The average number of years experience as a maintenance programmer for those who maintain the system is at least 2 years.
- ❑ Software maintenance personnel turnover per year is less than 30 percent.
- ❑ The proposed manning levels for this project are sufficient.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                            LOW
                                                            MODERATE
                                                            HIGH
                                                            VERY HIGH

Comments/Rationale:

Topic: Software Project Planning   **Question No.:** PP-8

Question: The SSA develops a training program for this project according to a documented approach.

Discussion: Ensure the approach requires the SSA to address:

- ❑ The minimum qualifications for every SSA position.
- ❑ Continuing professional education to allow individuals to maintain currency and increase their expertise.
- ❑ Programmed funds for continued professional education.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                          LOW
                                                                          MODERATE
                                                                          HIGH
                                                                          VERY HIGH

Comments/Rationale:

Topic: Software Project Planning   **Question No.:** PP-9

Question: The SSA conducts software testing according to a documented approach.

Discussion: Ensure the approach requires:

- ❑ The SSA to establish an independent test group.
- ❑ Standards for lower level testing activities (e.g., code and unit testing) and identification of test responsibilities.
- ❑ The test group to develop the test approaches independently of the maintenance programming group (invalid assumptions made during code development may be introduced if programmers develop test approaches).
- ❑ Documentation of test inputs and expected test outputs for each test case to enhance repeatability and to help identify the cause of test case failures.
- ❑ The test group to conduct formal testing rather than the maintenance programming group (will help eliminate test execution bias).
- ❑ The SSA to conduct informal (lower-level) testing to provide validity and repeatability.
- ❑ Documentation of informal testing approaches and results (software development folders provide evidence of lower-level testing completion and provide insight into the workings of the software modules).
- ❑ The system to undergo formal qualification testing prior to release to the field (to prove changes don't adversely impact the system).

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                     LOW
                                                                     MODERATE
                                                                     HIGH
                                                                     VERY HIGH

Comments/Rationale:

III. SSA Software Project Tracking and Oversight

Topic: Software Project Tracking and Oversight

Question No.: TO-1

Question: The SSA tracks software maintenance activities and communicates status according to a documented approach.

Discussion: Ensure the approach requires the software maintenance plan to be:

- ❏ Readily available for use by maintainers, testers, and management.
- ❏ Regularly updated as the work progresses to reflect progress, incorporate plan changes, and when major milestones are completed.
- ❏ Reviewed and approved at each revision.
- ❏ Maintained under configuration management.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                          LOW
                                                                          MODERATE
                                                                          HIGH
                                                                          VERY HIGH

Comments/Rationale:

24

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Topic: Software Project Tracking and Oversight

Question No.: TO-2

Question: The SSA has a documented approach to track the project's software size and takes corrective action when actual size differs significantly from estimates.

Discussion: Ensure the approach requires the SSA to:

- ❑ Track the sizes of all major software products and software activities (e.g., operational versus support software, deliverable versus nondeliverable products, SQA versus testing activities).
- ❑ Compare the actual size of the code (generated, fully tested, and delivered) to the documented estimates.
- ❑ Refine, monitor, and adjust on a regular basis the overall projected size (estimates versus actual).

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
LOW
MODERATE
HIGH
VERY HIGH

Comments/Rationale:

Topic: Software Project Tracking and Oversight   **Question No.:** TO-3

Question: The SSA has a documented approach to track the project's software costs and takes corrective action when actual costs differ significantly from estimates.

Discussion: Ensure the approach requires the SSA to:

- ❑ Compare actual expenditures over time against work completed to the documented estimates to identify potential overruns and underruns.
- ❑ Track software costs and compares actual versus estimated costs.
- ❑ Resolve changes to software cost profiles for projected activities according to documented review approaches.
- ❑ Ensure status and deviations that require management action are reported to the appropriate managers.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                      LOW
                                                                      MODERATE
                                                                      HIGH
                                                                      VERY HIGH

Comments/Rationale:

Topic: Software Project Tracking and Oversight   **Question No.:** TO-4

Question: The SSA has a documented approach to track the project's critical computer resources and takes corrective action when resources used differs significantly from estimates.

Discussion: Ensure the approach requires the SSA to:

❑ Track the estimated capacity and use of the project's critical computer resources for each major software component as appropriate (e.g., memory capacity, process use, channel capacity).

❑ Resolve changes in estimates of critical computer resources that affect commitments with the SPO or user according to a documented commitment review approach.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                   LOW
                                                                   MODERATE
                                                                   HIGH
                                                                   VERY HIGH

Comments/Rationale:

Topic: Software Project Tracking and Oversight   **Question No.:** TO-5

Question: The SSA has a documented approach to track the project's software schedule and takes corrective action when the project falls behind schedule.

Discussion: Ensure the approach requires the SSA to:

❑ Adjust software size and software cost measurements to reflect schedule adjustments.
❑ Compare software units designed, coded, unit tested, and integrated (including testing) into the next higher level component to the documented plan.
❑ Compare completion dates for test case/approach executions and the number of executions completed to the documented plan.
❑ Compare actual completion of software activities, milestones, and other commitments against the documented plan.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                 LOW
                                                                 MODERATE
                                                                 HIGH
                                                                 VERY HIGH

Comments/Rationale:

Topic: Software Project Tracking and Oversight   **Question No.:** TO-6

Question: The SSA tracks software maintenance activities according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

❑ Report and document technical status activity on a regular basis.
❑ Compare system release contents for successive builds to the documented release plan.
❑ Report and document problems identified in any of the software products.
❑ Track problems and problem fixes.
❑ Ensure the government owns the appropriate level of data rights.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                LOW
                                                                MODERATE
                                                                HIGH
                                                                VERY HIGH

Comments/Rationale:

Topic: Software Project Tracking and Oversight   **Question No.:** TO-7

Question: The SSA conducts formal reviews and software inspections, according to a documented approach, to address the accomplishments and results of the software maintenance effort.

Discussion: These reviews are conducted at selected project milestones, and at the beginning and completion of selected stages. Ensure the approach requires these reviews to:

- ❏ Occur at meaningful points in a project's schedule.
- ❏ Be conducted with the customer when appropriate.
- ❏ Address the plans and status of the software maintenance activities.
- ❏ Address the process implementations used in the software maintenance and software management activities.
- ❏ Result in the identification and documentation of significant issues, action items, and decisions.
- ❏ Address the software risks.
- ❏ Result in the refinement of the software maintenance plan, as appropriate.

Ensure the approach requires the SSA to:

- ❏ Conduct reviews between first-line managers and software maintenance staff.
- ❏ Conduct reviews between first-line managers and the project software manager.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                                    LOW
                                                                                    MODERATE
                                                                                    HIGH
                                                                                    VERY HIGH

Comments/Rationale:

Topic: Software Project Tracking and Oversight   **Question No.:** TO-8

Question: The SSA develops a software metric program according to a documented approach.

Discussion: Software metrics provide a means to instrument the software support process and determine if cost, schedule, and quality requirements are being met and to facilitate process improvement.

Ensure the approach requires the SSA to:

- ❏ Develop a well-planned, documented program for selecting and implementing the metrics.
- ❏ Gather each metric for a distinct purpose and use.
- ❏ Document an analysis methodology to determine if the metric is showing positive or negative information.
- ❏ Invest an appropriate level of effort in data collection for the metrics.

(*NOTE:* See AFP 800-48, *Software Management Indicators*, for candidate metrics and in-depth details on each metric)

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                      LOW
                                                      MODERATE
                                                      HIGH
                                                      VERY HIGH

Comments/Rationale:

Topic: Software Project Tracking and Oversight   **Question No.:** TO-10

Question: The SSA develops a viable security program for this project according to a documented approach (if applicable).

Discussion: Ensure the approach requires the SSA to:

- ❏ Document the program-specific security requirements.
- ❏ Incorporate DoD and Air Force standards and security guidance for handling, securing, and destroying classified material.
- ❏ Approve security practices and procedures for each computer system.
- ❏ Have the facilities and destruction equipment available for classified material storage and destruction.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                        LOW
                                                                        MODERATE
                                                                        HIGH
                                                                        VERY HIGH

Comments/Rationale:

Topic: Software Project Tracking and Oversight   **Question No.:** TO-11

Question: The SSA develops a viable safety program for this project according to a documented approach (if applicable).

Discussion: Ensure the approach requires the SSA to:

- ❑ Identify the safety-critical software components of the system.
- ❑ Incorporate DoD and Air Force standards and safety guidance for modifying, testing, and qualifying safety-critical software.
- ❑ Maintain a software Safety Data Library (SDL) with hazard analyses for the safety-critical components.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                    LOW
                                                                    MODERATE
                                                                    HIGH
                                                                    VERY HIGH

Comments/Rationale:

IV. SSA Software Contract Management
(Only applicable when the SSA contracts out work)

Topic: Software Contract Management   **Question No.:** SM-1

Question: The SSA defines and plans the contracted work according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

- ❑ Select the functions to be contracted to match the special skills and capabilities of potential contractors.
- ❑ Derive the contract statement of work, standards, and approaches from the software requirements and the software maintenance plan.
- ❑ Prepare, review, approve, and maintain the contract statement of work.
- ❑ Establish an appropriate metrics program to monitor the cost, schedule, and quality of the contractors work.
- ❑ Review and approve the contractor's software maintenance plan.
- ❑ Establish documented communication channels with the contractor to report requirements changes, software trouble reports, and new release actions.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                        LOW
                                                                        MODERATE
                                                                        HIGH
                                                                        VERY HIGH

Comments/Rationale:

Topic: Software Contract Management   **Question No.:** SM-2

Question: SSA management regularly conducts status/coordination reviews with the contractor's management according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

❑ Provide the contractor with appropriate visibility of the needs and desires of the product's end users and customer.

❑ Review the contractor's technical, cost, staffing, and schedule performance against the contractor's software maintenance plan.

❑ Review the use of critical computer resources.

❑ Address critical dependencies and commitments between groups and between the SSA and the contractor.

❑ Address any contract nonconformance issues and problems.

❑ Address project risks and review action items.

Rating:	ACCEPTABLE	UNACCEPTABLE + IMPACT:	VERY LOW
			LOW
			MODERATE
			HIGH
			VERY HIGH

Comments/Rationale:

Topic: Software Contract Management   **Question No.:** SM-3

Question: The SSA holds periodic technical reviews, interchanges, and formal reviews with the contractor according to a documented approach.

Discussion: Ensure the approach requires the SSA (at these reviews) to:

- ❏ Address the technical activities and resolve technical issues.
- ❏ Address the contractor's commitments for, plans for, and status of software maintenance activities and the corresponding process implementations.
- ❏ Address software risks.
- ❏ Refine the contractor's software maintenance plan, as appropriate.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                         LOW
                                                                         MODERATE
                                                                         HIGH
                                                                         VERY HIGH

Comments/Rationale:

Topic: Software Contract Management   **Question No.:** SM-4

Question: The SSA conducts acceptance testing as part of delivery of the contractor's products according to a documented approach.

Discussion: Ensure the approach requires the SSA to:

- ❏ Define, review, and approve the acceptance procedures and criteria for each product.
- ❏ Documents the results of the acceptance tests.
- ❏ Establishes an action plan for any product that does not pass acceptance testing.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                LOW
                                                                MODERATE
                                                                HIGH
                                                                VERY HIGH

Comments/Rationale:

V. SSA Software Quality Assurance

Topic: Software Quality Assurance   **Question No.:** QA-1

Question: The SSA prepares an SQA plan for each software project according to a documented approach.

Discussion: Ensure the approach requires the SQA group to:

❑ Develop the plan in conjunction with the project's software managers and software maintenance task leaders.
❑ Get other project groups (e.g., test group) to review and agree to the SQA plan.

Also, ensure the approach requires the SQA to address:

❑ Responsibilities and authority of the SQA group.
❑ Resource requirements for the SQA group (including staff, tools, and facilities).
❑ SQA group's participation in establishing the product's plan and process baseline.
❑ Product and process evaluations, audits, and reviews to be performed by the SQA group.
❑ Project standards and procedures used as the basis for the SQA group's reviews and audits.
❑ Documentation SQA is required to produce.
❑ Methodology and frequency of providing feedback to other project groups on SQA audits and reviews.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                    LOW
                                                                    MODERATE
                                                                    HIGH
                                                                    VERY HIGH

Comments/Rationale:

Topic: Software Quality Assurance   **Question No.:** QA-2

Question: Nonproject management monitors the activities of the SQA group according to a documented approach.

Discussion: Ensure the approach requires management to:

- ❑ Review and audit the SQA records and activities.
- ❑ Identify and implement corrective actions, as appropriate.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                       LOW
                                                                       MODERATE
                                                                       HIGH
                                                                       VERY HIGH

Comments/Rationale:

Topic: Software Quality Assurance   **Question No.:** QA-3

Question: The SQA group reviews representative samples of deliverable and designated nondeliverable software products and other maintenance activities according to a documented approach to ensure compliance with the designated process requirements.

Discussion: Ensure the approach requires the SQA group to:

- ❏ Evaluate the deliverable products prior to delivery to the customer.
- ❏ Evaluate the products against the appropriate software standards, practices, and requirements.
- ❏ Identify/report deviations and product deficiencies.
- ❏ Validate the contents of each formal release.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                  LOW
                                                                  MODERATE
                                                                  HIGH
                                                                  VERY HIGH

Comments/Rationale:

Topic: Software Quality Assurance   **Question No.:** QA-4

Question: The SQA group documents and resolves deviations in the software maintenance activities according to a documented approach.

Discussion: Ensure the approach requires the SQA group to:

- ❑ Resolve deviations from the software maintenance plan and the appropriate standards and procedures with appropriate software managers.
- ❑ Report any unresolved or noncompliance items to the designated senior manager.
- ❑ Review noncompliance items periodically until resolved.
- ❑ Maintain the documentation of noncompliance items under configuration management.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                 LOW
                                                                 MODERATE
                                                                 HIGH
                                                                 VERY HIGH

Comments/Rationale:

Topic: Software Quality Assurance   **Question No.:** QA-5

Question: The SQA group conducts regular reviews of its activities and findings according to a documented approach.

Discussion: Ensure the approach requires the SQA group to:

- ❏ Conduct regular reviews of its activities and findings with customer personnel.
- ❏ Conduct peer reviews.
- ❏ Regularly report the results of its reviews and audits to the software maintenance staff and managers.

Rating:	ACCEPTABLE	UNACCEPTABLE + IMPACT:	VERY LOW
			LOW
			MODERATE
			HIGH
			VERY HIGH

Comments/Rationale:

VI. SSA Software Configuration Management

Topic: Software Configuration Management   **Question No.:** CM-1

Question: The SSA develops an SCM plan for each software project according to a documented approach.

Discussion: Ensure the approach requires the SCM group to:

☐ Address the activities to be performed, the schedule of activities, the assigned responsibilities, and the resources required (including staff, tools and computer facilities).

☐ Address the SCM requirements and activities to be performed by the software maintenance group and other groups (e.g., test group).

☐ Develop the plan before the software maintenance activities begin.

☐ Review and coordinate the plan (all affected groups/individuals).

☐ Maintain the plan under configuration control.

☐ Use the plan as the basis for performing SCM activities.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                    LOW
                                                                    MODERATE
                                                                    HIGH
                                                                    VERY HIGH

Comments/Rationale:

Topic: Software Configuration Management   **Question No.:** CM-2

Question: The SSA establishes a configuration management library system as a repository for the software baselines according to a documented approach.

Discussion: Ensure the approach requires the library system to:

- ❑ Provide for the storage and retrieval of configuration items and their configuration components.
- ❑ Help enforce product standards (e.g., naming and format) of configuration items and their configuration components.
- ❑ Provide for the storage and recovery of archive versions of configuration items and their configuration components.
- ❑ Help ensure correct creation of software baseline products.
- ❑ Provide for the storage, update, and retrieval of SCM records.
- ❑ Produce SCM reports.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                   LOW
                                                   MODERATE
                                                   HIGH
                                                   VERY HIGH

Comments/Rationale:

Topic: Software Configuration Management   **Question No.:** CM-3

Question: The SSA places configuration items (software engineering products, process specifications, and software maintenance products) under configuration management according to a documented approach.

Discussion: Ensure the approach requires the SCM group to:

❑ Specify the characteristics of each configuration item.
❑ Specify the software baseline to which each configuration item belongs.
❑ Define the person responsible for each configuration item.

Examples of project configuration items include:
- Software requirements specifications, software designs, software code units.
- Software test approaches, software system build for the software test activity.
- Software system build for delivery to the customer.
- Process specifications, specifications for standards, and approaches.
- Compilers, test data, and other support tools.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                LOW
                                                                MODERATE
                                                                HIGH
                                                                VERY HIGH

Comments/Rationale:

Topic: Software Configuration Management   **Question No.:** CM-4

Question: The SCM group follows a documented approach to control changes to configuration items.

Discussion: Ensure the approach requires the SCM group to:

- ❑ Follow established controls to ensure that configuration items are checked in/out in a manner that maintains the correctness and integrity of the software baseline library.
- ❑ Perform reviews and identify regression test requirements to ensure changes have not caused unintended effects on the product.
- ❑ Audit revised configuration items to ensure they are prepared according to SCM standards (e.g., naming standards, format standards, version number and change history standards).
- ❑ Only enter configuration items accepted by the Software Configuration Control Board (SCCB) into the software baseline library.
- ❑ Present detailed cost and schedule information before SCCB approval.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                                 LOW
                                                                         MODERATE
                                                                           HIGH
                                                                        VERY HIGH

Comments/Rationale:

Topic: Software Configuration Management   **Question No.:** CM-5

Question: The SCM group follows a documented approach to create and control the release of software baseline products, and to record the status of configuration items and change requests.

Discussion: Ensure the approach requires the SCM group to:

- ❑ Record configuration management actions in sufficient detail so the software baseline contents and status are known and previous versions can be recovered.
- ❑ Maintain the current status and history of the software baselines.
- ❑ Uniquely identify each software baseline.

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                        LOW
                                                                        MODERATE
                                                                        HIGH
                                                                        VERY HIGH

Comments/Rationale:

Topic: Software Configuration Management   **Question No.:** CM-6

Question: The SCM group follows a documented approach that requires standard reports to document the SCM activities and the contents of the software baseline.

Discussion: Ensure the approach requires the SCM group to include in these reports the:

❑ SCCB meeting minutes.
❑ Change request summary and status.
❑ Trouble report summary and status (including fixes).
❑ Summary of changes made to the software baselines.
❑ Revision history of configuration items.
❑ Software baseline status.
❑ Findings of software baseline audits.
❑ Distribution list (affected groups and individuals).

Rating: ACCEPTABLE   UNACCEPTABLE + IMPACT: VERY LOW
                                                                    LOW
                                                                    MODERATE
                                                                    HIGH
                                                                    VERY HIGH

Comments/Rationale:

Topic: Software Configuration Management   **Question No.:** CM-7

Question: The SCM group follows a documented approach to prepare for, conduct, report results from, and track action items from software baseline audits.

Discussion: Ensure the approach requires the auditors to:

- ❑ Assess the integrity of software baselines.
- ❑ Review the structure and facilities of the library system for configuration management.
- ❑ Verify the completeness and correctness of the library contents.
- ❑ Determine if the SCM process is followed.

Rating: ACCEPTABLE   .   UNACCEPTABLE + IMPACT: VERY LOW
                                                                           LOW
                                                                           MODERATE
                                                                           HIGH
                                                                           VERY HIGH

Comments/Rationale:

SUMMARY ANSWER SHEET

Program Name: _____   STM Name: _____

DSE Name/Phone: _____   Evaluation Dates: _____

TOPIC AREA	QUESTION	RATING AND IMPACT		SCORE
Early SSA Planning and Involvement	PD-1	A	U: VL L M H VH	
	PD-2	A	U: VL L M H VH	
	PD-3	A	U: VL L M H VH	
	PD-4	A	U: VL L M H VH	
	PD-5	A	U: VL L M H VH	
	PD-6	A	U: VL L M H VH	
Software Project Planning	PP-1	A	U: VL L M H VH	
	PP-2	A	U: VL L M H VH	
	PP-3	A	U: VL L M H VH	
	PP-4	A	U: VL L M H VH	
	PP-5	A	U: VL L M H VH	
	PP-6	A	U: VL L M H VH	
	PP-7	A	U: VL L M H VH	
	PP-8	A	U: VL L M H VH	
	PP-9	A	U: VL L M H VH	
Software Project Tracking & Oversight	TO-1	A	U: VL L M H VH	
	TO-2	A	U: VL L M H VH	
	TO-3	A	U: VL L M H VH	
	TO-4	A	U: VL L M H VH	
	TO-5	A	U: VL L M H VH	
	TO-6	A	U: VL L M H VH	
	TO-7	A	U: VL L M H VH	
	TO-8	A	U: VL L M H VH	
	TO-9	A	U: VL L M H VH	
	TO-10	A	U: VL L M H VH	
	TO-11	A	U: VL L M H VH	
Software Contract Management	SM-1	A	U: VL L M H VH	
	SM-2	A	U: VL L M H VH	
	SM-3	A	U: VL L M H VH	
	SM-4	A	U: VL L M H VH	
Software Quality Assurance	QA-1	A	U: VL L M H VH	
	QA-2	A	U: VL L M H VH	
	QA-3	A	U: VL L M H VH	
	QA-4	A	U: VL L M H VH	
	QA-5	A	U: VL L M H VH	
Software Configuration Management	CM-1	A	U: VL L M H VH	
	CM-2	A	U: VL L M H VH	
	CM-3	A	U: VL L M H VH	
	CM-4	A	U: VL L M H VH	
	CM-5	A	U: VL L M H VH	
	CM-6	A	U: VL L M H VH	
	CM-7	A	U: VL L M H VH	

Overall Rating: ACCEPTABLE   UNACCEPTABLE   IMPACT RATING POINTS _____

When completed, fax this sheet to AFOTEC/SAS, DSN 246-5145, Commercial (505) 846-5145. Please attach a summary of your comments and rationale.